

the rapidity of its action and the great sympathy between the two nervous systems, and by the extensive range of the spinal symptoms, the intolerance is so indicated in these last by the stiffness of the lower jaw and of the tongue, with some degree of subsultus in the lower limbs or in all the body, and when these indications are present a warning is conveyed as to the effects of the medicine.

Dr. de Stefani maintains, in reference to the curative action of *nux vomica*, that the drug depresses the muscular force, if this has been stimulated by hypersthenia, and stimulates it when it has been apparently depressed by the same cause; that it lowers the pulse when it is hard and vibrating, and raises it when it is small and weak; that it lowers excessive heat of the skin and warms the skin when it is morbidly cold; that it regulates both the pulse and the heat of skin when they are variable several times in the day; that it relieves ardent thirst; that in costiveness which has resisted repeated purgatives it opens the bowels, and in some cases arrests diarrhoea; that it also arrests spontaneous hemorrhage and relieves hæmorrhoids; that it relaxes spasms, removes neuralgic, pleuritic, and rheumatic pains, calms delirium, and removes morbid wakefulness, or awakes patients from morbid sleep, promotes perspiration when deficient or arrests it when profuse, etc., whenever these symptoms are the results of a nervous affection. Dr. de Stefani, however, gives a judicious warning not to employ the *nux vomica* at first, even in cases where its use is indicated, unless the occasion be very urgent, because many nervous diseases may be cured by ordinary remedies. But when other means have failed, and the use of *nux vomica* is decided upon, then it is necessary to guard against giving too small doses, because the inefficacy of the dose might induce a doubt as to the action of the remedy, or, on the other hand, the supervention of new symptoms might be erroneously attributed to the drug instead of to the disease itself. When therefore the first prescription does not produce the desired effect, the dose should be increased as long as tolerance exists, and should be repeated for two, three, or more days, and, even when the symptoms have been relieved, the medicine should be continued, in order to prevent a relapse.

The dose of the alcoholic extract of *nux vomica* recommended by Dr. de Stefani in subjects of middle age suffering from chronic disease is from five to ten centigrammes (about $\frac{1}{20}$ to $\frac{1}{10}$ of 15.432 grains), and in serious cases this dose may be raised to 14 to 30 centigrammes, combining it with an equal quantity of extract of *rhus radicans* and some extract of henbane. In very severe diseases Dr. de Stefani thinks that this dose might be doubled or trebled, as, for instance, in tetanus and hydrophobia, but he has not yet employed it in such cases.

Dr. de Stefani gives the history of twelve cases treated by him in the manner indicated, and he regarded them as fully proving the efficacy of the drug.—*Brit. and For. Med.-Chir. Review*, from *Lo Sperimentale*, Firenze, May and June, 1874.

14. *On Gelatine Disks containing Alkaloids for Hypodermic Administration.*—Dr A. ERNEST SANSON, Assistant Physician to the London Hospital, in the *Medical Times and Gazette* for Oct. 31, 1874, makes the following practical and apparently excellent suggestion.

He says: "There can be no doubt of the value of the hypodermic injection of solutions containing salts of the sedative alkaloids in many conditions of pain, and very probably such a method of administration of remedies only waits a further development. Certain of the difficulties connected with the operation are now reduced to a minimum; syringes are well constructed, and, by improvements in the needle-pointed tubes, punctures are rendered almost painless. It has always seemed to me, however, that some objections stand in the way of the more extended employment of hypodermic medication. The first is that the solutions do not keep well, and in keeping vary in their strength. A practitioner requiring his solution in an emergency, finds it, after having left it for some time unused, mildewed and useless. A second objection is that the solutions are necessarily cumbrous to carry about. Chiefly, however, the objection is this: the cases calling for hypodermic treatment are sudden, the solution is not at hand, and by the time it is procured the great opportunity is lost.

"The idea of a plan of overcoming these difficulties was suggested to me by the use of the gelatine disks containing atropia employed for obtaining dilatation of the pupil. At my request Messrs. Savory and Moore prepared some gelatine disks containing (a) morphia acetate one-sixth of a grain, (b) atropia sulphate 1-120th of a grain in each. These are immediately soluble—one in two, two in three, drops of warm water—and I have found the injection of the solution thus made to be attended with the best results. The disks have also been employed in the wards of the London Hospital, and Mr. Shapley, one of the resident medical officers, informs me that they have succeeded perfectly well.

"The method I adopt of dissolving is to place the disk or disks in a teaspoon with two or three drops of water, and then warm over a spirit-lamp or candle. Solution takes place in a few seconds, and the fluid is at once taken up into the syringe and injected. It is obvious that by adopting these means, providing that the disks be carefully prepared, there is absolute certainty as to dosage. There is no doubt that the disks in a dry state will keep good for an unlimited period. No difficulty can be experienced as to having the hypodermic medicaments at hand, for the whole series—containing salts of morphia, atropia, caffeine, apomorphia, strychnia, ergotina, etc.—can be carried in an envelope which occupies scarcely any appreciable space in the smallest sized pocket-book."

15. *Practical Indications to be drawn from the State of the Pupil during Surgical Anæsthesia.*—M. P. BUDIN, in an article in *Le Progrès Médical* (Sept. 5, 1874), says that he has endeavoured to discover some sign which might serve as a guide in the administration of chloroform, and which would indicate the state of sensibility during its administration. Observation and experience have led him to the following conclusions:—

1st. There exists in surgical anæsthesia produced by chloroform a constant relation between the state of the pupil and the period of anæsthesia.

2d. During the period of excitement the pupil is *dilated*.

3d. This period having passed, the pupil contracts; this atresia is well marked, and continues for several minutes, accompanied with complete general anæsthesia.

4th. The *dilatation* of the pupil coming on during an operation indicates in general, either that the anæsthesia is less profound, or that the return of sensibility is approaching.

5th. The state of the pupil, then, may serve as a guide in the administration of chloroform.

6th. During operations which last a long time, if it be wished that the patient should be insensible and motionless, the anæsthesia should be so managed that the pupils continue constantly contracted.

7th. Finally, *vomiting* may produce dilatation of the pupils, cause the insensibility to disappear, and the patient to awake; it annuls, in part, the effects of the anæsthesia.

16. *Physiological Action of Hydrocyanic Acid, and the assumed Antagonism of Hydrocyanic Acid and Atropia.*—DRS. BOENIG and A. KNE have made some experiments on these subjects, in the physiological laboratory at Dorpat.

The following is a *résumé* of their conclusions:—

1. The operation of prussic acid is directed upon the central nervous system, whose functions are annihilated by large doses, after a brief excitement or increase.

2. The lesions of respiration and circulation arise from analogous changes in the activity of their centres in the medulla oblongata.

3. The vagus plays no part, either in the effect of prussic acid on the respiration, or in its effect upon the heart.

4. Atropia is not an antidote to prussic acid. The only rational treatment of this poisoning is the persevering performance of artificial respiration.

How the results of our researches agree with the physiologico-chemical ope-